

Fig. 1A (PRIOR ART)

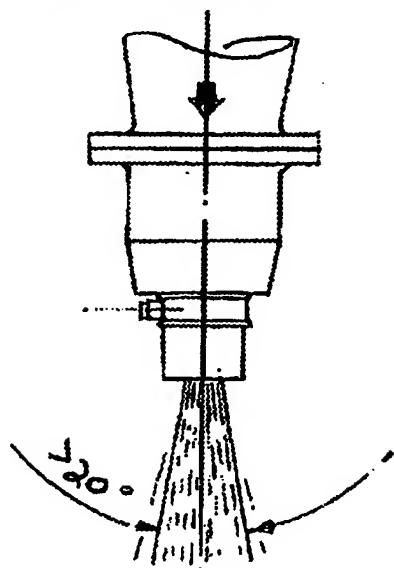


Fig. 1B (PRIOR ART)

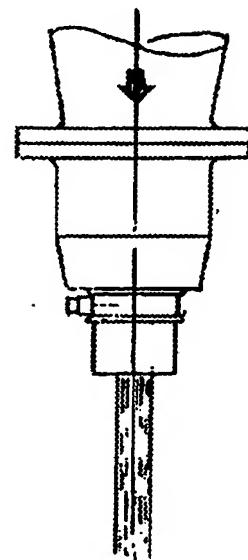


Fig. 2

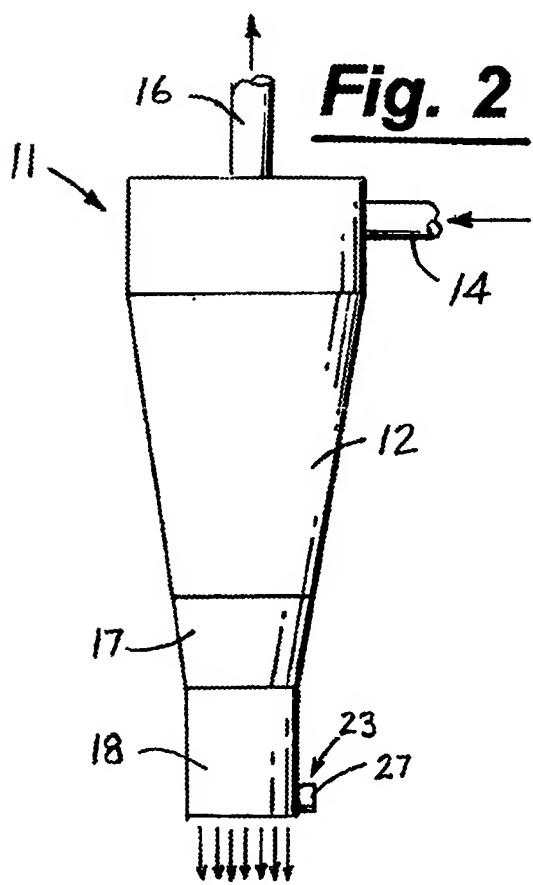
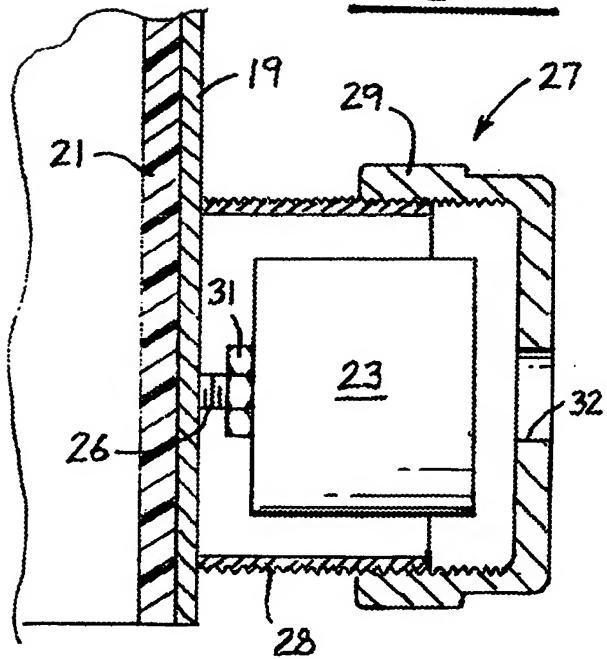
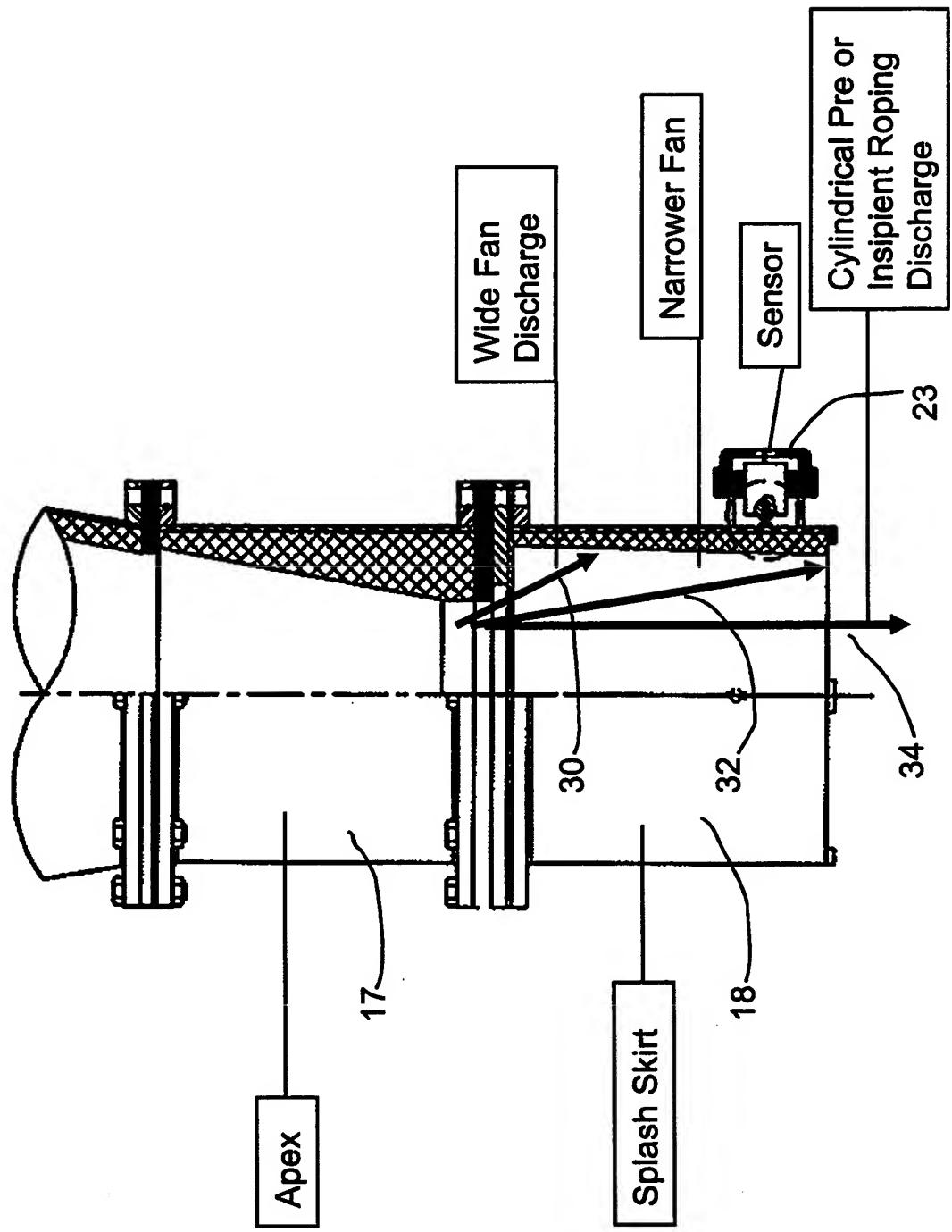


Fig. 3





Figur 4

Roping Detector

6 psi Current - good flow

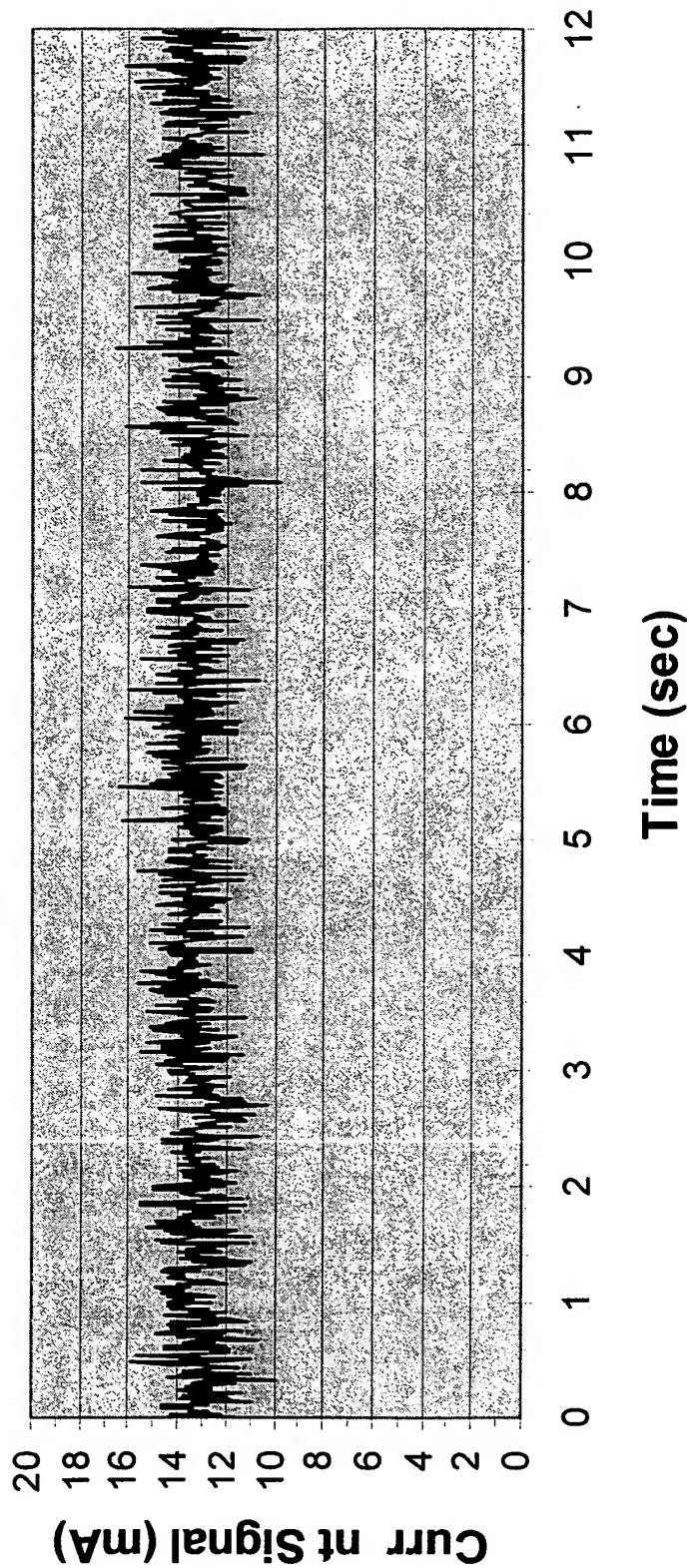


FIG. 5

8 psi Current - good flow but missing skirt some

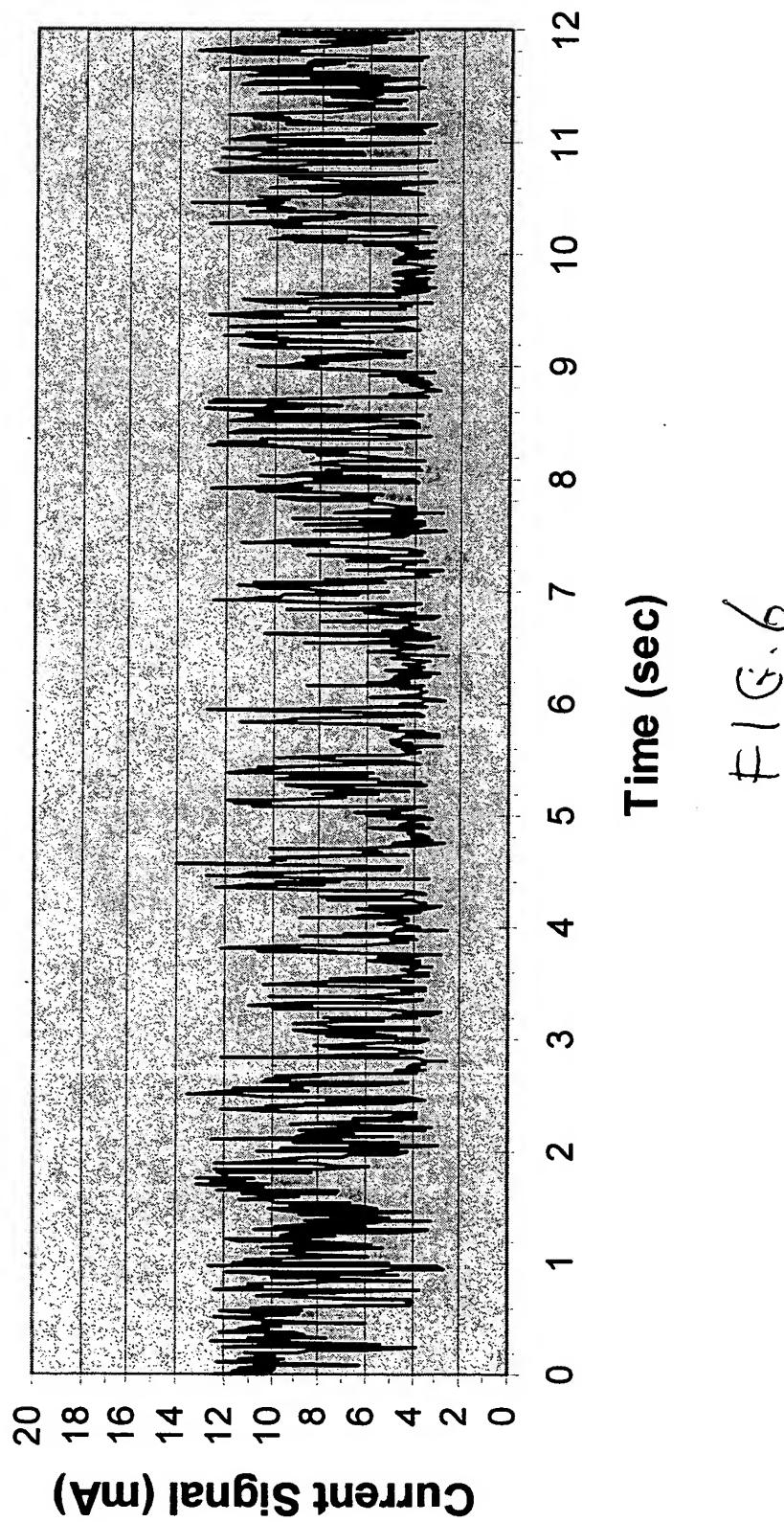
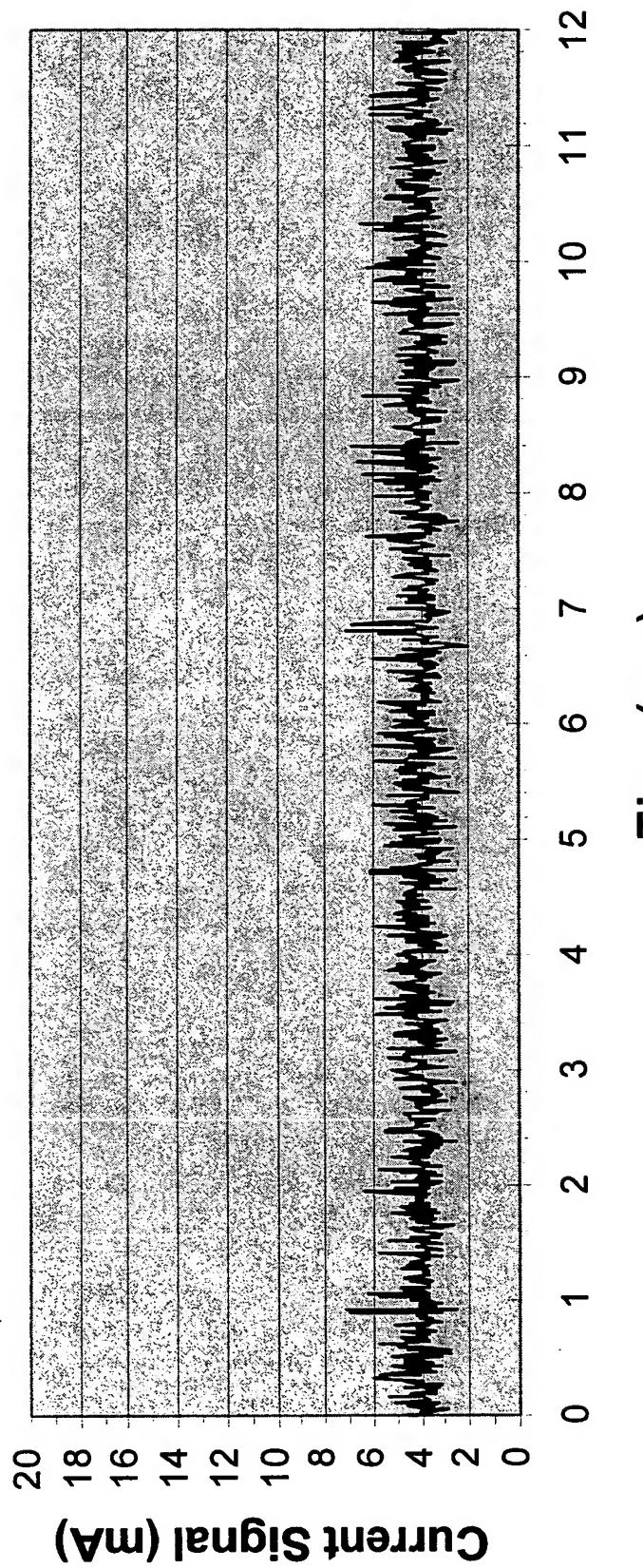


FIG. 6

10 psi Current - obvious roping



F1 G. 7